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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/848,483	05/03/2001	Raymond Patrick Johnston	1004-012US01	7764
32692	7590	10/06/2003		
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427				
			EXAMINER BELL, PAUL A	
			ART UNIT 2675	PAPER NUMBER
DATE MAILED: 10/06/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/848,483	<b>Applicant(s)</b> JOHNSTON ET AL.	
	<b>Examiner</b> PAUL A BELL	<b>Art Unit</b> 2675	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15, 18-22, 25-34 and 37-51 is/are rejected.
- 7) ☒ Claim(s) 16, 17, 23, 24, 35 and 36 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2-5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 5-8, 11-15, 20-22, 28, 31-34, 37, 47-51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 5-8, 11-15, 20-22, 28, 31-34, 37, 47-51, the phrase "hook-like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-4, 9, 10, 18, 19, 25-27, 29, 30, 38, and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by Walser et al. (4,423,294).

With regard to claim 1 Walser et al. teaches an apparatus for use in a switch array having spring elements (figure 1, item 134), the apparatus comprising: a bottom layer defining holes

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for aligning with spring elements (figure 1, item 126); and a top layer engaged with the bottom layer and biased away from the bottom layer upon protrusion of the spring elements through the holes in the bottom layer (figure 1, item 132).

With regard to claim 2 Walser et al. teaches the apparatus of claim 1, wherein the top layer includes a plurality of top layer sections, and each of the top layer sections directs user actuated force against one of the spring elements (figure 1, item 136).

With regard to claim 3 Walser et al. teaches the apparatus of claim 2, wherein the switch array is a keyboard (figure 1).

With regard to claim 4 Walser et al. teaches the apparatus of claim 3, wherein each of the top layer sections is aligned with one of a plurality of keys in the keyboard (figure 1).

With regard to claim 9 Walser et al. teaches the apparatus of claim 1, wherein the holes in the bottom layers are arranged to align with spring elements in the form of dome spring elements (figure 1, items 128 and 134).

With regard to claim 10 Walser et al. teaches the apparatus of claim 1, wherein the holes are sized in the range of 0.1 to 2 square centimeters (figure 1 inherent feature because the keys are finger activated).

With regard to claim 18 Walser et al. teaches a keyboard comprising: an array of sensor elements that generate signals in response to a force (figure 1, item 106); an array of spring elements corresponding to the array of sensor elements (figure 1, item 134); a bottom layer defining holes for aligning with spring elements (figure 1, item 126); and a top layer engaged with the bottom layer and biased away from the bottom layer upon protrusion of the spring elements through the holes in the bottom layer (figure 1, item 132).

With regard to claim 19 Walser et al. teaches the keyboard of claim 18, wherein the array of spring elements is an array of dome spring elements (figure 1, item 134), wherein each of the dome spring elements defines a chamber (figure 1, item 128), and wherein a plurality of channels interconnect the chambers of the dome spring elements such that each the chamber of each dome spring element is in fluid communication with the chamber of at least one of the other dome spring elements (figure 1, item 130).

With regard to claim 25 Walser et al. teaches the keyboard of claim 18, wherein the top and bottom layers are films (figure 1).

With regard to claim 26 Walser et al. teaches the keyboard of claim 18, further comprising keycaps attached to the top

layer (figure 1 shows key indicators 1, 2, 3 etc on each key so it broadly reads on keycaps).

With regard to claim 27 Walser et al. teaches the keyboard of claim 18, wherein the array of spring elements are attached to the top layer (figure 1, items 134, and 132).

With regard to claim 29 Walser et al. teaches a system comprising: a processor coupled to an input device (figure 1 shows a electronic keyboard it is inherent that a processor as broadly claimed is coupled to the keyboard), the input device including an array of sensor elements that generate signals in response to a force (figure 1, item 106), and an array of spring elements corresponding to the sensor elements (figure 1, item 134), the input device further including a bottom layer defining holes for aligning with spring elements (figure 1, item 126) and a top layer engaged with the bottom layer and biased away from the bottom layer upon protrusion of the spring elements through the holes in the bottom layer (figure 1, item 132).

With regard to claim 30 Walser et al. teaches the system of claim 29, wherein the array of spring elements is an array of dome spring elements (figure 1, item 134), wherein each of the dome spring elements defines a chamber (figure 1, item 128), and wherein a plurality of channels interconnect the chambers of the dome spring elements such that the chamber of each dome spring

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element is in fluid communication with the chamber of at least one of the other dome spring elements (figure 1, items 130).

With regard to claim 38 Walser et al. teaches the system of claim 29, further comprising keycaps attached to the top layer figure 1 shows key indicators 1, 2, 3 etc on each key so it broadly reads on keycaps).

With regard to claim 45 Walser et al. teaches the system of claim 29, wherein the array of spring elements are attached to the top layer (figure 1, items 132 and 1340.

5. Claim 46-51 are rejected under 35 U.S.C. 102(e) as being anticipated by Galkiewicz WO 01/58302 A1 "SELF-MATING RECLOSABLE MECHANICAL FASTENERS AND BINDING STRAP" filed 5 February 2001.

With regard to claim 46 WO teaches an apparatus comprising: a bottom layer, a top layer, and means for engaging the top and bottom layer such that upon engagement, an amount of travel is defined between the top and bottom layers (figure 2a and abstract).

With regard to claim 47 WO teaches the apparatus of claim 46, wherein the means for engaging includes a plurality of hook-like elements (figure 2a).

With regard to claim 48 WO teaches an apparatus comprising: a first layer including a first set of hook-like elements, a

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second layer including a second set of hook-like elements, wherein the first and second sets of hook-like elements are engaged, thereby attaching the first layer to the second layer (figures 3a-3d).

With regard to claim 49 WO teaches the apparatus of claim 48, wherein the engaged sets of hook-like elements collectively define a distance of travel between the first and second layers (figures 3a-3d).

With regard to claim 50 WO teaches the apparatus of claim 48, wherein the distance of travel is in the range of 0.05 centimeters to 1 centimeter (figure 2a, items 42 and 40).

With regard to claim 51 WO teaches the apparatus of claim 48, further comprising a spring element biasing the first and second layers away from one another (figure 3c and 3b show that there is spring (or flexible) to item 15).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.



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7. Claims 39-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walser et al. (4,423,294).

With regard to claims 39-44 Walser et al. does not teach his keys being "used" in a desktop computer keyboard, laptop computer keyboard, a handheld computer keypad, a cellular telephone keypad, an instrument panel keypad and an appliance key pad, however all such recitations are merely directed towards an "obvious intended use" that the Walser et al. keys are capable of performing.

#### ***Double Patenting***

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1-4, 9, 10, 18, 19, 25-27, 29, 30, 38-45 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3, 6-8, 11-29, 32-42 of copending Application No. 09/848,458. Although the conflicting claims are not identical, they are not patentably distinct from each other because they share a common specification and the only difference is in one you call it a "dome spring element" and the other you call it a "spring element" but the common specification teaches they must be the same element.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Allowable Subject Matter***

10. Claims 5-8, 11-15, 20-22, 28, 31-34, and 37 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

11. Claims 16, 17, 23, 24, 35 and 36 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Bell whose telephone number is (703) 306-3019.

If attempts to reach the examiner by telephone are unsuccessful the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377 can help with any inquiry of a general nature or relating to the status of this application.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

Or Faxed to: (703) 872-9314 (for Technology Center 2600 only)

Or Hand-delivered to: Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor  
(Receptionist).

*Paul Bell*

Paul Bell

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September 24, 2003

*Steven Saras*  
**STEVEN SARAS**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**